

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Docket No.: Q54451

Do-Young KO

Appln. No.: 09/328,007

Group Art Unit: 2613

Confirmation No.: 6191

Examiner: Allen C. WONG

Filed: June 8, 1999

For: HORIZONTAL/VERTICAL SCANNING
FREQUENCY CONVERTING APPARATUS
IN MPEG DECODING BLOCK

RECEIVED

AUG 11 2003

Technology Center 2600

STATEMENT UNDER 37 CFR § 1.97(e)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

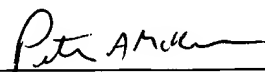
Sir:

The undersigned hereby states, upon information and belief:

That each item of information contained in the Information Disclosure Statement filed concurrently herewith was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of said Information Disclosure Statement.

Respectfully submitted,

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860


Peter A. McKenna
Registration No. 38,551

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

Date: August 7, 2003

The Patent office of the People's Republic Of China

Address: No. 6 XITUCHENG ROAD, JIMEN BRIDGE, HAIDIAN DISTRICT, BEIJING

Post Code: 100088

Applicant: <u>SAMSUNG ELECTRONICS CO., LTD.</u>	ISSUING DATE:
Agent: <u>Ying Ma</u>	<u>2003.06.20</u>
Application No.: <u>99106937.4</u>	
Title: <u>HORIZONTAL/VERTICAL SCANNING ...</u>	

THE FIRST OFFICE ACTION

1. ☒ The applicant filed a request for substantive examination on Year ____ Month ____ Day ____ according to Article 35 Paragraph 1 of the Patent Law. The examiner has conducted a substantive examination to the above-mentioned patent application.

☐ According to Article 35 paragraph 2 of the Patent Law. Chinese Patent office decided on its own initiative to conduct a substantive examination to the above-mentioned patent application.

2. ☒ The applicant requested to take

Year 98 Month 06 Day 14 on which an application is filed with the KR patent office as the priority date.

Year ____ Month ____ Day ____ on which an application is filed with the ____ patent office as the priority date.

Year ____ Month ____ Day ____ on which an application is filed with the ____ patent office as the priority date.

☒ The applicant has submitted the copy of the earliest application document certified by the competent authority of that country.

☐ According to Article 30 of the Patent Law, if the applicant has not yet submitted the copy of the earliest application document certified by the competent authority of that country, the declaration for Priority shall be deemed not to have been made.

☐ This application is a PCT application.

3. ☐ The applicant submitted the amended document(s) on Year ____ Month ____ Day ____ and Year ____ Month ____ Day ____ after examination, ____ submitted on Year ____ Month ____ Day ____ is/are not accepted.

____ submitted on Year ____ Month ____ Day ____ is/are not accepted

because the said amendment(s) ☐ is/are not in conformity with Article 33 of the Patent Law.

☐ is/are not in conformity with Rule 51 of the Implementing Regulations.

☐ The concrete reason(s) for not accepting the amendment(s) is/are presented on the text of Office Action.

4. ☒ The examination has been conducted based on the application text as originally filed.

☐ The examination has been conducted based on the following text(s):

page(s) ____ of the specification, Claim(s) ____, and figure(s) ____ in the original text of the application submitted on the filing day.

page(s) ____ of the specification, claim(s) ____, and figure(s) ____ submitted on Year ____ Month ____ Day ____

page(s) ____ of the specification, claim(s) ____, and figure(s) ____ submitted on Year ____ Month ____ Day ____

5. ☐ This notification was made without undergoing search.

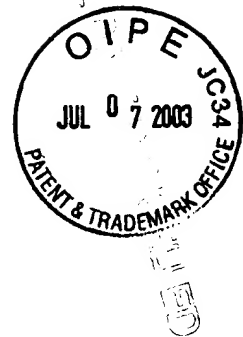
☒ This notification was made with undergoing search.

☒ The following reference document(s) is/are cited:(the reference numeral(s) thereof will be used in the examination procedure hereafter)

RECEIVED

AUG 11 2003

Technology Center 2600



NO.	Reference No. or Title	Publishing Date
1	EP 0781041A1	1997.06.25
2	US 5642170A	1997.01.24
3		
4		
5		

6. Concluding comments

☒ on the specification:

- ☐ The contents of the application are in contrary to Article 5 of the Patent Law and therefore are not patentable.
- ☐ The contents of the application do not possess the practical applicability as prescribed in Paragraph 4 of Article 5 of the Patent Law.
- ☐ The specification is not in conformity with the provision of Paragraph 3 of Article 26 of the Patent Law.
- ☒ The presentation of the specification is not in conformity with the provision of Rule 18 of the Implementing Regulations.

☒ on the claims:

- ☐ Claim(s) _____ belong(s) to non-patentable subject matter as prescribed in Article 25 of the Patent law.
- ☐ Claim(s) _____ do(es) not comply with the definition of a patent as provided in Rule 2 paragraph 1 of the Implementing Regulations.
- ☒ Claim(s) 1 do(es) not possess novelty as requested by Article 22 paragraph 2 of the Patent Law.
- ☒ Claim(s) 2-5 do(es) not possess inventiveness as requested by Article 22 paragraph 3 of the Patent Law.
- ☐ Claim(s) _____ do(es) not possess practical applicability as requested by Article 22. paragraph 4 of the Patent Law.
- ☒ Claim(s) 1 do(es) not comply with the provision of Article 26 paragraph 4 of the Patent Law.
- ☐ Claim(s) _____ do(es) not comply with the provision of Article 31 paragraph 1 of the Patent Law.
- ☐ Claim(s) _____ do(es) not comply with provision of Rules 20 to 23 of the Implementing Regulations.
- ☐ Claim(s) _____ do(es) not comply with the provision of Article 9 of the Patent Law.
- ☐ Claim(s) _____ do(es) not comply with the provision of Rule 12 paragraph 1 of the Implementing Regulations.

The detailed analysis for the above concluding comments is presented on the text of this Office Action.

7. Based on the above concluding comments, the examiner is of the opinion that

- ☐ The applicant should amend the application document(s) in accordance with the requirement as specified in the Office Action.
- ☐ The applicant should, in his observation, expound the patentability of the application of the application, amend the defects pointed out in the Office Action; or the application can hardly be approved.
- ☒ The examiner deems that the application lacks substantive features to make it patentable. Therefore, the application will be rejected if no convincing reasons are provided to prove its patentability.

8. The applicant should pay attention to the following matters:

- (1) According to Article 37 of the Patent Law, the applicant is required to submit his observations within Four months upon receipt of this Office Action. If the time limit for making response is not met without any justified reason, the application to have been withdraw.
- (2) The amendment(s) made by the applicant must meet the requirements of Article 33 of the Patent Law. The amended text should be in duplicate, its format should conform to the related confinement in the Guidance for Examination.
- (3) The applicant and/or the agent should not go to the Chinese Patent Office to interview the examiner without being invited.
- (4) The observation and/of the amended document(s) must be mailed or delivered to the Receiving Section of the Chinese Patent Office. No legal effect shall apply for any document(s) that not mailed to or reached the Receiving Section.

9. The text of this Office Action contains 2 page(s), and has the following attachment(s):

☒ 2 copies of the cited references, all together 57 pages.

Examination Dept. No. 9 Examiner _____ Seal of Examination Dept. for business only _____

(if the Office Action wasn't stamped by the specified seal, it has no legal effect)

TEXT OF THE FIRST OFFICE ACTION

After examination, the opinions are provided as follows:

(1) The portion of claims

Claim 1: claim 1 have described a prediction memory for storing I picture data and forward prediction restored P picture data, however, the specification of the present application disclosed a first prediction memory 205 and a second prediction memory 206 for respectively storing I picture data and forward prediction restored P picture data, i.e., two memories have been used in the specification. Therefore, claim 1 can not be supported by the specification. In addition, the relevant contents of “a prediction memory switching portion” as described in claim 1 are described in the portion of the embodiment of carrying out the invention of the specification as “a first switching unit, a second switching unit and a third switching unit”. Therefore, claim 1 is not consistent with the specification. Moreover, the phrase “switching frequency” as described in claim 1 has not been mentioned in the specification which has only disclosed the corresponding phrase “scanning frequency”. Therefore, claim 1 is not consistent with the specification, accordingly, which does not comply with the relevant provision as prescribed in Article 24, paragraph 4 of the Patent Law of China. Whether the phrase “switching frequency” as described in claim 1 refers to the phrase “scanning frequency” as described in line 1 of claim 1? However, even if claim 1 can be supported by the specification, it does not comply with the provision on novelty as prescribed in Article 22, paragraph 2 of the Patent Law of China.

Claim 1 claims to protect an apparatus for changing a horizontal/vertical scanning frequency in a decoding block for restoring an MPEG signal. The Reference 1 (EP0781041A1) has disclosed a system for converting frame frequency of images, and particularly disclosed the technical features as follows: the present system comprising: a memory (1) for storing I frame, and the image possesses the different types of 1, 2 and 3 (corresponding to the I, P and B pictures described in claim 1 of the present application); the images of type 1 can be directly stored in frame memory (1) without prediction; and the images of types 2 and 2 can be stored in frame memory (3); a motion estimation circuit 5 for carrying out motion estimation to the

data of frame 1 which are stored in memory (1) and the data of frame 2 and 3 which are stored in frame memory (3); inputting the motion vector into the interpolator 4 (corresponding to the mean operating unit described in claim 1 of the present application), for generating calculated mean data for bidirectional prediction (refer to lines 15 to 57 of page 7 of the specification of the present Reference); carrying out the different time process depending on the different kinds of pictures; switching the data of the data block to the different memory; increasing the switching frequency of different kinds of data stored in the memory with respect to a general scanning method, using the motion vector of the data block (refer to line 30, page 8 to line 50 of page 9 of the specification of the present Reference). It can be seen that all the technical features of claim 1 have been disclosed by the Reference 1 and the both the technical solution of claim 1 and the Reference 1 are the same, and both the technical problems to be solved in the Reference 1 and the claim 1 are the same, i.e., having increased the scanning frequency and having decreasing the number of the memory, and both the technical field of claim 1 and the Reference 1 are the same. Therefore, claim 1 does not comply with the provision on novelty as prescribed in Article 22, paragraph 2 of the Patent Law of China.

The additional technical features of claim 5 are as follows: the output data switching portion performs switching control so as to repeat the data of a corresponding horizontal line of previous picture between horizontal lines of a picture when the value of a motion vector is no more than a reference value and to insert the calculated line mean data of the mean operating portion between the horizontal lines of the picture when the value of the motion vector is larger than the reference value. The following technical features have been disclosed in the Reference 1: comparing the value of error with another threshold value, the data blocks are not changed when the value of error is no more than the present threshold value, and when the value of error is larger than the present threshold value, the calculated line mean data in vertical direction are inserted so as to obtain the diploid precision in vertical direction, accordingly, the blinking point can be eliminated and the picture quality can be improved. The Reference 1 has disclosed the technical features of considering the motion vector from the horizontal direction. Therefore, it is not difficult for those skilled in the art to obtain the additional technical features of claim 5 from the technical features mentioned above as disclosed in the Reference 1. When claim 1 does not possess novelty, claim 5 does not comply with the provision on inventive

step as prescribed in Article 22, paragraph 3 of the Patent Law of China.

The only differences between claim 4 and claim 5 are as follows: inserting the corresponding line data of a previous picture stored in the prediction memory. The following technical features have been disclosed in the Reference 1 (refer to line 10, page 21 to line 21 of page 22 of the specification of the present Reference): there are three kinds of coordinate inserting mode, and one of them are inserting the data stored in the corresponding area of memory 1 and 3. It can be seen that it is not difficult for those skilled in the art to think out to obtain the additional technical features of claim 4 by applying the present features into claim 1. When claim 1 does not possess novelty, claim 5 does not comply with the provision on inventive step as prescribed in Article 22, paragraph 3 of the Patent Law of China.

The additional technical features of claim 3 are as follows: the output data switching portion performs switching control so as to double the vertical scanning frequency of a video signal by repeating output data twice in units of a picture with respect to a general scanning method. The following technical features have been disclosed in the Reference 1 (refer to lines 6 to 8 of page 8 of the specification of the present Reference): frame 1 is repeatedly output twice in the output terminal of the frame memory to recuperate the delay so as to carry out the inserting operation. It can be seen the following inspiration can be obtained: repeatedly outputting the data can take an effect of doubling the frequency. It can be seen that it is not difficult for those skilled in the art to obtain the additional technical features of claim 3 from the Reference 1. When claim 1 does not possess novelty, claim 5 does not comply with the provision on inventive step as prescribed in Article 22, paragraph 3 of the Patent Law of China.

The additional technical features of claim 2 are as follows: the period of a data read is reduced to by setting read clock frequencies of the prediction memory and the B picture memory to be two times higher than the read clock frequencies of a general scanning method. An inserting method for motion compensated interpolation of intermediate fields or frames has been disclosed in the Reference 2 (refer to lines 58 to 62 of column 4 of the specification of the present Reference), and particularly disclosed the technical features as follows: the frequency of input signal is 50/60 HZ, in the motion compensated interpolation apparatus, the period of reading is reduced to by reading the output of frequency of 50/120 HZ via a motion prediction apparatus and a switching portion. It can be seen that all the additional technical

features have been disclosed in the Reference 2. When claim 1 does not possess novelty, claim 2 does not comply with the provision on inventive step as prescribed in Article 22, paragraph 3 of the Patent Law of China.

(2) The portion of specification

According to the relevant provision of Rule 18, paragraph 1 of the Implementing Regulations of the Patent Law of China, the specification shall include five parts as technical field, background art, contents of the invention, description of figures, and mode of carrying out the invention. The present specification does not comply with the concerned provision for not including five parts as mentioned above and lacking a heading before each part of the text of the specification.

The portion of the technical field in the specification has been drafted the invention per se, which does not comply with the relevant provision of Rule 18, paragraph 1 of the Implementing Regulations of the Patent Law of China. And the portion of the technical field should be drafted as the detailed technical field to which the invention pertains or the portion of the technical field should be drafted as the detailed technical field directly applied by the invention.

Due to the above reasons, the present application does not meet the requirements of being granted a patent right. Furthermore, no other substantive content that deserves a patent right is recorded in the specification. Therefore, the present application does not possess a prospect of being granted a patent right even if the applicant makes amendments to the application documents. The present application will be rejected if the applicant fails to come up with convincing reasons within the designated time limit of the present Office Action.

Examiner: Liang Junli
Qu Shujun